

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

200313614-1

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on May 4 2007

Signature Lisa D. Jones

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Application Number

10/760,652

Filed

01/20/2004

First Named Inventor

Gregory E. Tierney

Art Unit

2188

Examiner

Mardochee Chery

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/98)

☒ attorney or agent of record. 39,334
Registration number _____

☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____


Signature

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Telephone number

4 May 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ Total of 1 forms are submitted.

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Date: May 4 2007

Lisa D. Jones
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THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Gregory Edward Tierney, et al.
Serial No.	:	10/760,652
Filing Date	:	January 20, 2004
For	:	SYSTEMS AND METHOD FOR CREATING ORDERING POINTS
Group Art Unit	:	2188
Examiner	:	Mardochee Chery
Docket No.	:	2003313614-1

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

In response to the Final Office Action dated on March 13, 2007 ("Final Action"), and in accordance with a Notice of Appeal submitted herewith and in further consideration of Applicant's response submitted on October 16, 2006, please enter and consider the following remarks.

REMARKS

Applicant respectfully submits that the Examiner has erred in the rejection of claims 1 to 34 for at least the following reasons.

I. Claims 1-6, 8-9, and 13.

Claim 1 is not obvious in light of Cypher (2004/0002992) in view of Hum (U.S. 6,922,756) because the Examiner has erred by failing to establish a *prima facie* case of obviousness regarding claims 1-6, 8-9 and 13. The Examiner has also failed to demonstrate that there is proper motivation to combine the prior art references to enable one of ordinary skill in the art to create the systems of claims 1-6, 8-9 and 13.

Before considering the combination of Hum and Cypher, the Final Office Action contends that each of Hum and Cypher disclose different parts of claim 1. In particular, Section 23 of the Office Action alleges Cypher discloses nearly the entire claim 1 except for an admitted deficiency for which the Examiner relies on Hum. See Office Action at pages 14-15.

Significantly, neither Cypher nor Hum teach or suggest that a node can associate an F-state with a copy of requested data in response to the particular conditions recited in claim 1. Specifically, claim 1 recites that the first node (which provides a source broadcast request for data) associates an F-state with a copy of the data in response to (i) receiving the copy of the data from memory and (ii) receiving non-data responses from other nodes in the system. In contrast to the contention in Section 6(a) of the Final Action, Applicant's arguments on page 8 of its prior response ("Prior Response") to the Office Action dated July 25, 2007 ("Prior Action") do not rely upon an identity of terminology, but instead point out the deficiency of Cypher. Furthermore, the statements of the Examiner in sections 6(b) and 6(c) of the Final Action fail to demonstrate that Cypher in view of Hum '756 teach or suggest the combination of features and interrelationships as recited in claim 1. See Prior Response page 8. Section 6(b) of the Final Action focuses on one example in Applicant's specification that describes example features of what an F-state may include, but the Examiner's analysis still fails to remedy the clear deficiencies of Cypher; namely, Cypher failing to teach or suggest that a node associates an F-state with a copy of data in the manner recited in claim 1. The Examiner is hereby challenged to identify specifically where Cypher discloses that a node associates an F-state with a copy of data in response to the conditions recited in claim 1. In the absence of successfully responding to this challenge, it must be presumed an admission by the Examiner that the art of record fails to teach what claim 1 recites.

In section 7 of the Final Action, the Examiner further mischaracterizes Applicant's arguments regarding claim 1, as Applicant does not simply state that Cypher fails to teach or suggest "a first node

operative to provide a source broadcast requesting data" separate from the additional combination of features recited in the system of claim 1. See Prior Response page 9, lines 3-5. In fact, this mischaracterization of Applicant's arguments further demonstrates the failure of the Examiner to consider expressly claimed features, as discussed above in the preceding paragraph.

Section 8 of the Final Action purports that much of what is recited in claim 1 is disclosed in Cypher at paragraph [0068]. As stated by the Applicant in the Prior Response page 9, paragraph 1, Cypher paragraph [0068] is irrelevant to what is recited in claim 1. Specifically, paragraph [0068] of Cypher relates to a particular read-to-own coherency request (See FIG. 8A of Cypher) using a specific directory based coherence protocol, which results in the coherency unit 132 of a request agent 100 being supplied the data "directly" on a point-to-point basis to the requesting agent. Cypher Para. [0068]. The Examiner has neglected to mention that the request agent 100 does not provide a source broadcast request, but instead provides the read-to-own request to the home client 102 in a point-to-point mode. Cypher at para. [0068], lines 1-4, and para. [0064]. Moreover, the request agent 100 of Cypher does not receive non-data responses from other nodes in the system, as also recited in claim 1, which non-data responses include an indication that the at least a second node includes a shared copy of the data. Instead, Cypher discloses that the home agent 102 detects the shared state itself and provides a data coherency reply directly to the request agent. Cypher at para. [0068], lines 9-12.

In regard to section 9 of the Final Action, Applicants respectfully disagree that the Examiner has skillfully or otherwise exposed the motivation required to combine Cypher and Hum '756 to create the system of claim 1. Instead, at least for the reasons stated in the Prior Response pages 8, paragraph. 4 to page 10, paragraph 1, the Applicant respectfully submits that the Examiner has failed to establish the prior art references to provide the required motivation for one of ordinary skill in the art to create the system of claim 1. Significantly, according to Cypher, after invalidation of the shared coherency units by the home agent 102, there are no shared copies remaining (Cypher at para. [0068], lines 14-26). As a consequence of such invalidation of shared copies, according to the same para. [0068] of Cypher relied on in the Final Action, there would be no motivation to add an F-state to the cited section of Cypher. In view of such differences between what is taught in Cypher and what is recited in claim 1, why would one of ordinary skill in the art be motivated to employ the F-state of Hum '756 to the cited system of Cypher when only one copy of the data is being sent from the home agent and all shared copies are invalidated by the home agent?

In Section 10 of the Final Action, the Examiner again appears to mischaracterize selected sections of Cypher out of their actual and intended context. See the reasons stated on page 10, paragraph 2 of Applicant's Prior Response. Both paragraphs [0008] and [0069] relate to point-to-point mode coherence

requests - there being no disclosure of a source broadcast requesting data from the first node, as recited in claim 1. Moreover, claim 2 recites characteristics of "the non-data responses," whereas the parts of Cypher explained in the Final Action are clearly themselves commands or requests - NOT responses. Moreover, the Examiner's contention at the top of page 7 of the Final Action has mischaracterized Cypher by omitting or ignoring express teachings; namely, that the "home agent sends invalidate coherency demand to all other slave agents **with a shared copy**" (emphasis added), as disclosed in Cypher. That is, the invalidate coherency demands (not responses) are sent to only those slave agents with shared copy. See Cypher Par. [0069]. Therefore, the Examiner's erroneous analysis fails to consider the teachings of Cypher in its entirety. See *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983).

Applicant agrees that Cypher discloses both a broadcast (BC) mode and a point-to-point (PTP) mode. However, the Examiner fails to appreciate that there is no teaching or suggestion in Cypher or in other art of record to impose specific features disclosed as part of the PTP mode into the protocol utilized for BC mode. Stated differently, when Cypher is considered in its entirety, there is no basis to conclude, as the Examiner has done, that features and characteristics of the PTP mode coherence requests are applicable to BC mode requests. See also page 11, paragraphs 1 and 2 of Applicant's Prior Response. Additionally, the Examiner erred by contending that a multicast transaction is a broadcast as the same sections of Cypher cited by the Examiner contradict this contention. For instance, Cypher discloses that "broadcast requests are broadcast to all processors, and memory." Cypher [0007] as well as states that "home agent 102 transmits invalidate coherency demands to each of the slave agents 104 **which are maintaining shared copies of the affected coherency unit.**" Cypher Par. [0068] (emphasis added). Therefore, according to the cited sections of Cypher, multicasts are not broadcast to all processors and memories.

Regarding Section 11 of the Final Action, Applicant has not argued the references individually, except to refute allegations in the Office Action that a reference discloses what is being claimed. See, e.g., Applicant's Prior Response, page 12, paragraph 1 and elsewhere.

Additionally, in contrast to the Examiner's contention in section 13 of the Final Action, as stated on page 12, paragraph 1 of Applicant's Prior Response, the combination of Cypher, Hum '756 and Hum '047 fails to motivate one of ordinary skill to create the system of claim 1. For similar reasons, the Examiner has improperly rejected claims 10 and 31.

In Section 15 of the Final Action, the Examiner "impugns the Applicants' position..." while reiterating an erroneous rejection of the Prior Office action. Clearly, the Examiner has not fully considered the Applicant's argument as stated in the Prior Response on page 13, paragraph 3. The

Examiner's reliance on Arimilli at Col. 6, lines 39 to 64 remains misplaced. Applicant concedes that Arimilli discloses moving the coherency state of a requested cache item toward an expected coherency state. See Arimilli Col. 6, lines 39 to 45. However, changing a cache state as disclosed in Arimilli is not transferring from a source broadcast protocol to a forward progress protocol in response to a request failing in the source broadcast protocol, as recited, *e.g.*, in claim 11. Instead, Arimilli discloses providing a mechanism within a protocol - not transferring to a different protocol. See, *e.g.*, Arimilli col. 2, lines 50 to 56 and elsewhere in Arimilli.

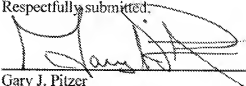
In regard to section 17, the Examiner has erred by failing to consider the combination of features recited in the multiprocessor network of claim 14. In sharp contrast to the Examiner's contention, the features that the Examiner indicates as missing are recited in claim 14. Perhaps, the Examiner failed to consider the continued portion of claim 14 on the top of page 4 of Applicant's Prior Response. For example, claim 14 recites, *inter alia*. "...the second node transitioning to a third state in response to receiving the shared copy of the data from the first node, such that the second node becomes the ordering point in the network for providing a shared copy of the data." While certain language used in Applicant's prior response to distinguish claim 14 from the art of record may not be expressly recited, the concepts being discussed are claimed and were accurately described in a way to distinguish the art of record from what is being claimed. For instance, since claim 14 recites that the second node becomes an ordering point of the system, it is accurate to characterize this feature as migration of an ordering point.

Contrary to the Examiner's assertions in Section 20 of the Final Action, the Examiner's reliance upon Cypher paragraph [0069] is both tenuous and misplaced for at least the reasons stated in the Prior Response on page 16, paragraph 2, and page 17, paragraph 4. Thus, Cypher either alone or in any combination with Arimilli and Hum '756 fails to teach or suggest the systems recited in claim 21 or 29.

In view of the foregoing remarks, Applicant respectfully requests reconsideration of this application and that the application be passed to issue. Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 08-2025.

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Respectfully submitted,



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